

SYR-HSD-5001-C1.ST25  
SEQUENCE LISTING

<110> Syrrx, Inc.  
 <120> CRYSTALLIZATION OF 11-BETA-HYDROXYSTEROID DEHYDROGENASE TYPE 1  
 <130> SYR-HSD-5001-C1  
 <140> Not Yet Assigned  
 <141> 2004-03-12  
 <160> 13  
 <170> PatentIn version 3.2  
 <210> 1  
 <211> 292  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> Amino acid sequence for full-length human wild type  
 11-beta-hydroxysteroid dehydrogenase type 1  
 <222> (1)..(292)

<400> 1

Met Ala Phe Met Lys Lys Tyr Leu Leu Pro Ile Leu Gly Leu Phe Met  
 1 5 10 15

Ala Tyr Tyr Tyr Tyr Ser Ala Asn Glu Glu Phe Arg Pro Glu Met Leu  
 20 25 30

Gln Gly Lys Lys Val Ile Val Thr Gly Ala Ser Lys Gly Ile Gly Arg  
 35 40 45

Glu Met Ala Tyr His Leu Ala Lys Met Gly Ala His Val Val Val Thr  
 50 55 60

Ala Arg Ser Lys Glu Thr Leu Gln Lys Val Val Ser His Cys Leu Glu  
 65 70 75 80

Leu Gly Ala Ala Ser Ala His Tyr Ile Ala Gly Thr Met Glu Asp Met  
 85 90 95

Thr Phe Ala Glu Gln Phe Val Ala Gln Ala Gly Lys Leu Met Gly Gly  
 100 105 110

Leu Asp Met Leu Ile Leu Asn His Ile Thr Asn Thr Ser Leu Asn Leu  
 115 120 125

Phe His Asp Asp Ile His His Val Arg Lys Ser Met Glu Val Asn Phe  
 130 135 140

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Leu Ser Tyr Val Val Leu Thr Val Ala Ala Leu Pro Met Leu Lys Gln  
145 150 155 160

Ser Asn Gly Ser Ile Val Val Val Ser Ser Leu Ala Gly Lys Val Ala  
165 170 175

Tyr Pro Met Val Ala Ala Tyr Ser Ala Ser Lys Phe Ala Leu Asp Gly  
180 185 190

Phe Phe Ser Ser Ile Arg Lys Glu Tyr Ser Val Ser Arg Val Asn Val  
195 200 205

Ser Ile Thr Leu Cys Val Leu Gly Leu Ile Asp Thr Glu Thr Ala Met  
210 215 220

Lys Ala Val Ser Gly Ile Val His Met Gln Ala Ala Pro Lys Glu Glu  
225 230 235 240

Cys Ala Leu Glu Ile Ile Lys Gly Gly Ala Leu Arg Gln Glu Glu Val  
245 250 255

Tyr Tyr Asp Ser Ser Leu Trp Thr Thr Leu Leu Ile Arg Asn Pro Cys  
260 265 270

Arg Lys Ile Leu Glu Phe Leu Tyr Ser Thr Ser Tyr Asn Met Asp Arg  
275 280 285

Phe Ile Asn Lys  
290

<210> 2  
<211> 807  
<212> DNA  
<213> Homo sapiens

<220>  
<221> Human cDNA sequence encoding residues 24-292 of  
11-beta-hydroxysteroid dehydrogenase type 1  
<222> (1)..(807)

<400> 2  
aacgaggaat tcagaccaga gatgctccaa ggaaagaaag tgattgtcac aggggccagc 60  
aaagggatcg gaagagagat ggcttatcat ctggcgaaga tgggagccca tgtggtggtg 120  
acagcgaggt caaaagaaac tctacagaag gtggtatccc actgcctgga gcttggagca 180  
gcctcagcac actacattgc tggcaccatg gaagacatga ccttcgcaga gcaatttgtt 240  
gccaagcag gaaagctcat gggaggacta gacatgctca ttctcaacca catcaccaac 300

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acttctttga atctttttca tgatgatatt caccatgtgc gcaaaagcat ggaagtcaac 360
ttcctcagtt acgtggtcct gactgtagct gccttgccca tgctgaagca gagcaatgga 420
agcattgttg tcgtctcctc tctggctggg aaagtggctt atccaatggt tgctgcctat 480
tctgcaagca agtttgcttt ggatgggttc ttctcctcca tcagaaagga atattcagtg 540
tccagggcca atgtatcaat cactctctgt gttcttggcc tcatagacac agaaacagcc 600
atgaaggcag tttctgggat agtccatatg caagcagctc caaaggagga atgtgccctg 660
gagatcatca aaggggggagc tctgcgcca gaagaagtgt attatgacag ctcaactctg 720
accactcttc tgatcagaaa tccatgcagg aagatcctgg aatttctcta ctcaacgagc 780
tataatatgg acagattcat aaacaag 807

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<210> 3
<211> 705
<212> DNA
<213> Homo sapiens

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<220>
<221> Human cDNA sequence encoding residues 24-258 of
11-beta-hydroxysteroid dehydrogenase type 1
<222> (1)..(705)

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<400> 3
aacgaggaat tcagaccaga gatgctccaa ggaaagaaag tgattgtcac aggggcccagc 60
aaagggatcg gaagagagat ggcttatcat ctggcgaaga tgggagccca tgtggtggtg 120
acagcgagggt caaaagaaac tctacagaag gtggtatccc actgcctgga gcttggagca 180
gcctcagcac actacattgc tggcaccatg gaagacatga ccttcgcaga gcaatttggt 240
gccaagcag gaaagctcat gggaggacta gacatgctca ttctcaacca catcaccaac 300
acttctttga atctttttca tgatgatatt caccatgtgc gcaaaagcat ggaagtcaac 360
ttcctcagtt acgtggtcct gactgtagct gccttgccca tgctgaagca gagcaatgga 420
agcattgttg tcgtctcctc tctggctggg aaagtggctt atccaatggt tgctgcctat 480
tctgcaagca agtttgcttt ggatgggttc ttctcctcca tcagaaagga atattcagtg 540
tccagggcca atgtatcaat cactctctgt gttcttggcc tcatagacac agaaacagcc 600
atgaaggcag tttctgggat agtccatatg caagcagctc caaaggagga atgtgccctg 660
gagatcatca aaggggggagc tctgcgcca gaagaagtgt attat 705

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<210> 4
<211> 732
<212> DNA
<213> Homo sapiens

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<220>

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<221> Human cDNA sequence encoding residues 24-267 of  
11-beta-hydroxysteroid dehydrogenase type 1

<222> (1)..(732)

<400> 4

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aacgaggaat tcagaccaga gatgctccaa ggaaagaaag tgattgtcac aggggccagc      60
aaagggatcg gaagagagat ggcttatcat ctggcgaaga tgggagccca tgtggtggtg      120
acagcgaggt caaaagaaac tctacagaag gtggtatccc actgcctgga gcttggagca      180
gcctcagcac actacattgc tggcaccatg gaagacatga ctttcgcaga gcaatttggt      240
gccaagcag gaaagctcat gggaggacta gacatgctca ttctcaacca catcaccaac      300
acttctttga atctttttca tgatgatatt caccatgtgc gcaaaagcat ggaagtcaac      360
ttcctcagtt acgtggtcct gactgtagct gccttgccca tgctgaagca gagcaatgga      420
agcattgttg tcgtctcttc tctggctggg aaagtggctt atccaatggt tgctgcctat      480
tctgcaagca agtttgcttt ggatgggttc ttctctcca tcagaaagga atattcagtg      540
tccaggggtca atgtatcaat cactctctgt gttcttggcc tcatagacac agaaacagcc      600
atgaaggcag tttctgggat agtccatatg caagcagctc caaaggagga atgtgccctg      660
gagatcatca aagggggagc tctgcgcca gaagaagtgt attatgacag ctactctgg      720
accactcttc tg                                                    732
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<210> 5

<211> 286

<212> PRT

<213> Custom

<220>

<221> Amino acid sequence for residues 24-292 of 11-beta-hydroxysteroid  
dehydrogenase type 1 with a N-terminal MKHQHQHQHQHQHQPL tag

<222> (1)..(286)

<400> 5

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Met Lys His Gln His Gln His Gln His Gln His Gln His Gln Gln Pro
1          5          10          15
```

```
Leu Asn Glu Glu Phe Arg Pro Glu Met Leu Gln Gly Lys Lys Val Ile
20          25          30
```

```
Val Thr Gly Ala Ser Lys Gly Ile Gly Arg Glu Met Ala Tyr His Leu
35          40          45
```

```
Ala Lys Met Gly Ala His Val Val Val Thr Ala Arg Ser Lys Glu Thr
50          55          60
```

```
Leu Gln Lys Val Val Ser His Cys Leu Glu Leu Gly Ala Ala Ser Ala
65          70          75          80
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His Tyr Ile Ala Gly Thr Met Glu Asp Met Thr Phe Ala Glu Gln Phe  
85 90 95

Val Ala Gln Ala Gly Lys Leu Met Gly Gly Leu Asp Met Leu Ile Leu  
100 105 110

Asn His Ile Thr Asn Thr Ser Leu Asn Leu Phe His Asp Asp Ile His  
115 120 125

His Val Arg Lys Ser Met Glu Val Asn Phe Leu Ser Tyr Val Val Leu  
130 135 140

Thr Val Ala Ala Leu Pro Met Leu Lys Gln Ser Asn Gly Ser Ile Val  
145 150 155 160

Val Val Ser Ser Leu Ala Gly Lys Val Ala Tyr Pro Met Val Ala Ala  
165 170 175

Tyr Ser Ala Ser Lys Phe Ala Leu Asp Gly Phe Phe Ser Ser Ile Arg  
180 185 190

Lys Glu Tyr Ser Val Ser Arg Val Asn Val Ser Ile Thr Leu Cys Val  
195 200 205

Leu Gly Leu Ile Asp Thr Glu Thr Ala Met Lys Ala Val Ser Gly Ile  
210 215 220

Val His Met Gln Ala Ala Pro Lys Glu Glu Cys Ala Leu Glu Ile Ile  
225 230 235 240

Lys Gly Gly Ala Leu Arg Gln Glu Glu Val Tyr Tyr Asp Ser Ser Leu  
245 250 255

Trp Thr Thr Leu Leu Ile Arg Asn Pro Cys Arg Lys Ile Leu Glu Phe  
260 265 270

Leu Tyr Ser Thr Ser Tyr Asn Met Asp Arg Phe Ile Asn Lys  
275 280 285

<210> 6  
<211> 252  
<212> PRT  
<213> Custom

<220>  
<221> Amino acid sequence for residues 24-258 of 11-beta-hydroxysteroid  
dehydrogenase type 1 with a N-terminal MKHQHQHQHQHQPL tag

&lt;222&gt; (1)..(252)

&lt;400&gt; 6

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Met Lys His Gln His Gln His Gln His Gln His Gln His Gln Gln Pro
1      5      10      15

Leu Asn Glu Glu Phe Arg Pro Glu Met Leu Gln Gly Lys Lys Val Ile
      20      25      30

Val Thr Gly Ala Ser Lys Gly Ile Gly Arg Glu Met Ala Tyr His Leu
      35      40      45

Ala Lys Met Gly Ala His Val Val Val Thr Ala Arg Ser Lys Glu Thr
      50      55      60

Leu Gln Lys Val Val Ser His Cys Leu Glu Leu Gly Ala Ala Ser Ala
65      70      75      80

His Tyr Ile Ala Gly Thr Met Glu Asp Met Thr Phe Ala Glu Gln Phe
      85      90      95

Val Ala Gln Ala Gly Lys Leu Met Gly Gly Leu Asp Met Leu Ile Leu
      100      105      110

Asn His Ile Thr Asn Thr Ser Leu Asn Leu Phe His Asp Asp Ile His
      115      120      125

His Val Arg Lys Ser Met Glu Val Asn Phe Leu Ser Tyr Val Val Leu
      130      135      140

Thr Val Ala Ala Leu Pro Met Leu Lys Gln Ser Asn Gly Ser Ile Val
145      150      155      160

Val Val Ser Ser Leu Ala Gly Lys Val Ala Tyr Pro Met Val Ala Ala
      165      170      175

Tyr Ser Ala Ser Lys Phe Ala Leu Asp Gly Phe Phe Ser Ser Ile Arg
      180      185      190

Lys Glu Tyr Ser Val Ser Arg Val Asn Val Ser Ile Thr Leu Cys Val
      195      200      205

Leu Gly Leu Ile Asp Thr Glu Thr Ala Met Lys Ala Val Ser Gly Ile
      210      215      220

Val His Met Gln Ala Ala Pro Lys Glu Glu Cys Ala Leu Glu Ile Ile
225      230      235      240

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Lys Gly Gly Ala Leu Arg Gln Glu Glu Val Tyr Tyr  
245 250

<210> 7  
<211> 261  
<212> PRT  
<213> Custom

<220>  
<221> Amino acid sequence for residues 24-267 of 11-beta-hydroxysteroid  
dehydrogenase type 1 with a N-terminal MKHQHQHQHQHQHQPL tag  
<222> (1)..(261)  
<400> 7

Met Lys His Gln His Gln His Gln His Gln His Gln His Gln Gln Pro  
1 5 10 15

Leu Asn Glu Glu Phe Arg Pro Glu Met Leu Gln Gly Lys Lys Val Ile  
20 25 30

Val Thr Gly Ala Ser Lys Gly Ile Gly Arg Glu Met Ala Tyr His Leu  
35 40 45

Ala Lys Met Gly Ala His Val Val Val Thr Ala Arg Ser Lys Glu Thr  
50 55 60

Leu Gln Lys Val Val Ser His Cys Leu Glu Leu Gly Ala Ala Ser Ala  
65 70 75 80

His Tyr Ile Ala Gly Thr Met Glu Asp Met Thr Phe Ala Glu Gln Phe  
85 90 95

Val Ala Gln Ala Gly Lys Leu Met Gly Gly Leu Asp Met Leu Ile Leu  
100 105 110

Asn His Ile Thr Asn Thr Ser Leu Asn Leu Phe His Asp Asp Ile His  
115 120 125

His Val Arg Lys Ser Met Glu Val Asn Phe Leu Ser Tyr Val Val Leu  
130 135 140

Thr Val Ala Ala Leu Pro Met Leu Lys Gln Ser Asn Gly Ser Ile Val  
145 150 155 160

Val Val Ser Ser Leu Ala Gly Lys Val Ala Tyr Pro Met Val Ala Ala  
165 170 175

Tyr Ser Ala Ser Lys Phe Ala Leu Asp Gly Phe Phe Ser Ser Ile Arg  
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180

185

190

Lys Glu Tyr Ser Val Ser Arg Val Asn Val Ser Ile Thr Leu Cys Val  
195 200 205

Leu Gly Leu Ile Asp Thr Glu Thr Ala Met Lys Ala Val Ser Gly Ile  
210 215 220

Val His Met Gln Ala Ala Pro Lys Glu Glu Cys Ala Leu Glu Ile Ile  
225 230 235 240

Lys Gly Gly Ala Leu Arg Gln Glu Glu Val Tyr Tyr Asp Ser Ser Leu  
245 250 255

Trp Thr Thr Leu Leu  
260

<210> 8  
<211> 24  
<212> DNA  
<213> Custom

<220>  
<221> DNA sequence encoding PCR Primer hsd1\_24-f  
<222> (1)..(24)

<400> 8  
aacgaggaat tcagaccaga gatg

24

<210> 9  
<211> 29  
<212> DNA  
<213> Custom

<220>  
<221> DNA sequence encoding PCR Primer hsd1\_292-r  
<222> (1)..(29)

<400> 9  
cttgtttatg aatctgtcca tattatagc

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<210> 10  
<211> 23  
<212> DNA  
<213> Custom

<220>  
<221> DNA sequence encoding PCR Primer hsdC272Sqcf  
<222> (1)..(23)

<400> 10  
tcagaaatcc atccaggaag atc

23



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<210> 11  
 <211> 23  
 <212> DNA  
 <213> Custom

<220>  
 <221> DNA sequence encoding PCR Primer hsdC272Sqcr  
 <222> (1)..(23)

<400> 11  
 gatcttcctg gatggatttc tga 23

<210> 12  
 <211> 27  
 <212> DNA  
 <213> Custom

<220>  
 <221> DNA sequence encoding PCR Primer hsd1-258-r  
 <222> (1)..(27)

<400> 12  
 ataatacact tcttcttggc gcagagc 27

<210> 13  
 <211> 27  
 <212> DNA  
 <213> Custom

<220>  
 <221> DNA sequence encoding PCR Primer hsd1-267-r  
 <222> (1)..(27)

<400> 13  
 cagaagagtg gtccagagtg agctgtc 27